GEORGIA FORESTRY COMMISSION

Request For
USDA State & Private Forestry Grant

Applicant:	Georgia Forestry Commission P.O. Box 819 Macon, GA 31202
Project Name:	Georgia State Assessment – Etowah Watershed Pilot
Project Lead:	Susan Reisch, Sustainable Community Forestry Program, 678-476-6227, sreisch@gfc.state.ga.us
Project Proposal Abstract:	The Georgia Forestry Commission (GFC) will develop a state assessment methodology that will assist in identifying conditions and issues to be addressed in State Response Plans, prioritizing future projects and setting goals. This state assessment pilot will be conducted in the Etowah River Watershed in conjunction with key partners. The methodology developed will help determine how forest conditions will be described throughout all ownerships, how forest related benefits and services will be identified, how trends and issues of concern will be made apparent and prioritized, how high priority forest landscapes will be addressed, and how strategies for addressing the critical issues and landscapes will be outlined. The statewide methodology will be based on the lessons learned from the Etowah Watershed and will include a monitoring plan. The State Assessment will be geospatially based and is expected to include more than 30 data layers.
Partnering Agencies and Groups / Individuals:	GFC, USDA Forest Service, NRCS, EPA, Univ. of Georgia (UGA) Institute of Ecology, UGA Natural Resource Spatial Analysis Laboratory (NARSAL), Georgia Mts. and Coosa Valley RDCs, The Nature Conservancy (TNC), The Georgia Conservancy, Atlanta Regional Comm. (ARC), Georgia Dept. of Nat. Resources (DNR), Env. Protection Div., (EPD), Keep Bartow Beautiful, Rolling Hills and Limestone Valley RC&Ds, Georgia Land Trust, Forsyth Forest Consv. Group, Mtn. Consv.Trust of Georgia, Local Govts., Upper Chattahoochee RiverKeeper
Project Location:	The Etowah River is a major headwater tributary of the Coosa River system. It originates in the Blue Ridge but also drains the Piedmont and Valley & Ridge provinces. The Etowah Basin lies on the north edge of the Atlanta metropolitan area. The suburban counties that comprise the lower portion of the system have been among the fastest growing counties in the nation over the last decade including Bartow, Cherokee, Cobb, Dawson, Forsyth, Lumpkin, Paulding, and Pickens. Cities include Acworth, Ball Ground, Canton, Dallas, Dawsonville, Emerson, Jasper, Kennesaw, Marietta, Holly Springs, Roswell, Waleska, and Woodstock. US Representatives: Nathan Deal (Dist. 9), Phil Gingrey (Dist.11), Tom Price (Dist. 6)
Expected Completion Quarter:	(Q4 2008)
Total Federal Funding Request:	$187,500

Total Proposal Budget (Including Matching Funds):

Cost Category	Requested Funds	Matching Funds	Total
Personnel/Day Laborer	$25,000.00	$130,000.00	$155,000.00
Materials & Supplies	$7,500.00	$7,500.00	$15,000.00
Travel	$0,000.00	$5,000.00	$5,000.00
Consultants/Contracts	$155,000.00	$30,000.00	$185,000.00
Overhead / Administration	$0,000.00	$10,000.00	$10,000.00
Equipment Usage / Rental	$0,000.00	$10,000.00	$10,000.00
Printing	$0,000.00	$2,000.00	$2,000.00
Other	$0,000.00	$0,000.00	$0,000.00
TOTALS	$187,500.00	$194,500.00	$382,000.00

Project Description and Benefits:

The State Assessment Pilot project is designed to benefit the forest in the following ways relative to our national interests:

A major challenge in the Etowah Watershed and across the state of Georgia is the conversion of Agricultural lands and forests to subdivisions, industrial parks, shopping malls, and other developments at a very rapid pace. This issue is addressed in the Conserve Working Forests National Theme and in the Southern Region in the SGSF Fractured Forests Issue Paper. A geospatial analysis and methodology developed through this project will provide GFC with the information needed to determine a baseline from which to measure the rate of conversion of forested landscapes to other uses, and prioritize which landscapes should be conserved. To do this, GFC proposes to gather specific data layers from within the Etowah Watershed including current population, political boundaries, conservation easements, tree canopy loss and impervious surface increases (1991 through 2008), forest insect and disease pathogens, invasive species, communities at risk from wildfire, underserved communities, carbon registrants, corporations, public partners, endangered species, tree ordinances, tree inventories, management plans for urban and rural forest resources, arborists, tree groups, air quality non-attainment, industrial forestland, timber ownerships, mills, employment, potential biofuels, SWRA(fire), SCFA, taxation, state and federal land, fire occurrence, preparedness, hurricane/tornado occurrence, flood plains, drought (climate/rainfall), transportation, utilities, asthma and other human health related occurrences, UV hot spots, miles of firebreaks plowed, and recreational trails based on the most current data available. The Geo PDF mapping tool will be used to make this analysis user-friendly, allowing users to view maps with multiple coordinate displays, measure length and area, turn layers on and off and search map attributes.

As described in the Southern Region Water Quality Issue Paper and the Enhance Benefits Associated With Trees and Forests National Theme, several sensitive small-stream fish species, including the Cherokee darter, appear to be declining. Small-stream habitat in the developed portion of the basin is generally poor due in large part to upstream development. As a result of forest conversion to other intensive uses, riparian vegetation necessary for stabilizing stream banks and protecting water quality is being cleared; runoff from upland areas has increased and is of poorer quality; and stream geomorphology is being altered by filling, piping, channelization, altered stream flows and other modifications. These changes in land use frequently cause accelerated erosion that covers streambeds with silt and reduces foraging and spawning success of aquatic species. Additional small-stream habitat has been inundated by water-supply reservoirs built to support the increasing human population.

In addition to addressing water quality and quantity issues, a pilot state assessment of the Etowah Watershed will help determine what major forces of change are taking place and impacting forest-based natural resources. Effects of habitat loss on fish species is well documented in the current Habitat Conservation Plan, but effects of forest parcelization, reduced timber inventories and forest management are less certain. In order for GFC to be effective in responding, we must first determine where fractured forests are most likely to occur in the watershed, which forest types are most vulnerable and what policies are, and need to be, in place.

This North Georgia watershed is a prime region to address wildland-urban interface challenges as this State Assessment Pilot Project will focus on the National Theme of Protecting Forests from Harm in relation to wildfire, insect and disease issues. Vegetation types in relation to current and future development, and homes in the watershed will be analyzed and mapped to aid in future suppression of wildfires which threaten the health and productivity of forests. A forest health assessment on the Etowah Watershed will benefit this project by providing a factual basis for interaction.

As described in the Changing Markets Southern Region Issue paper, the timber market in the watershed area is causing forest industry landowners to divest their forestland holdings, compounding forest fragmentation. The timber market and timber prices within the watershed will be analyzed to determine pressure for potential divestitures of forestland holdings. Local mills will be mapped.

The state assessment pilot will include data from the EPA and EPD regarding forest water quality in the Etowah Watershed and maps of impaired streams. This information will help GFC continue to educate the public, policy leaders and developers. The current Habitat Conservation Plan is a natural framework for collaboration.

Project Evaluation Criteria Discussion:

The purpose of this project is to develop a state assessment methodology that will assist GFC with the identification of conditions and issues to be addressed in state response plans, prioritization of future projects and goal setting using the most up-to-date technology and information available.

National and Regional Relevance – This pilot project will allow GFC to collaboratively develop an assessment of forest conditions and a methodology for determining high priority landscapes. The following GIS layers will be gathered to identify and target conservation efforts on forest lands at risk: Housing upstarts, conservation easements, tree canopy, air quality non-attainment, impaired streams, insects and disease, timber markets, environmental services and fire prevention, and other natural-resource based and non-natural resource based data sources. The analysis of this data will allow GFC to measure the rate of conversion of forestland and other changes that are directly impacting the target watershed. All of these layers provide further information to help address the National and Regional Issues. The methodology will help identify critical landscapes, and the tools and strategies used in future Response Plans will help conserve working forest landscapes, protect forests from harm, and enhance the benefits associated with trees and forests.

Prioritization – GFC will examine the current conditions within this watershed using the best technology that is available and the most comprehensive list of geospatial analysis layers. We will use the Critical Forestland Assessment (2002 U&CF grant project) as a tool to identify high priority landscapes and the best opportunity for investment of future funds, in addition to developing new methodology as needed. The procedures used to gather current conditions and trends in this landscape, and the new methodology, will be replicated in future statewide assessments. A plan for continuing to gather this information beyond 2008 will be developed.

Meaningful Scale – Urbanization is increasing within this watershed at an alarming rate. Working within the watershed scale will allow GFC to determine programs and deliver services to our partners and customers that have a meaningful impact. Services and model programs can be replicated throughout the state in future years.

Collaboration – A coalition of watershed partners has already been gathered for a Watershed Habitat Protection Program. The State Assessment Pilot Project is a natural fit within the Etowah Watershed because the basic partnership framework already exists. Since the partners are engaged and focused on finding ways to protect habitat for endangered fishes, they are interested in working collaboratively to address new strategies for protecting forestland, which also ultimately protects water quality, provides clean air and water, recreational opportunities, a stronger local economy, renewable energy, cultural values and ecosystem services. The State Assessment will be coordinated with the Etowah Watershed Habitat Conservation Plan and other state national resource strategies to the greatest extent possible.

Outcomes – The outcomes include a comprehensive list of included data layers and analysis of the critical landscapes within the watershed based on the derived methodology. The project will identify threats such as impairments to water quality and forest fragmentation. The methodology will take all of the layers into consideration and prioritize critical landscapes, and provide the flexibility to use the methodology on other landscapes across the state and region. A process will be determined for how to prioritize, search, create, and analyze data. This methodology could be adapted for use by other states.

This pilot project will also determine what new technology is needed and how it will be used, how to monitor the state assessments, and potential tools and strategies for the State Response Plan. Information gaps will also be identified.

One Temporary Day Laborer will be hired by GFC to assist our GIS Specialist and the consultants. A State Assessment document will be produced.

Technology –On-the-ground information will be captured, as well as plan for future geospatial analysis data layers that will allow us to continue to measure the rates of change. The best existing information will be used. We will use in-house GIS equipment and the skills of our GIS Coordinator, who is proficient with Geo PDF. We plan to buy an additional license for Geo PDF and use existing data layers available from Regional Development Centers and other partners.

Project Evaluation Criteria Discussion (Continued):

Integrated Delivery – A collective effort will be made by GFC and its partners to communicate the visual maps and key findings to the watershed planning group partners. Complementary state and federal programs will be involved in the data collection and development of the analysis methodology. For example, RDCs will be involved by providing existing data layers and examples of prioritization. Land Trusts will use the new maps to identify critical forestland that could be linked and purchased. Landowners that become involved may be able to use this information to determine ecosystem services. Educational organizations will be able to use maps for educating the public about the benefits associated with trees and forests. Layers developed through the SCFA (Southern Critical Forestland Assessment) will be used.

Leverage – Working with the current watershed partners that are already established will leverage resources. State personnel and equipment and pre-existing GIS layers will be used as a match.

Influence Positive Change – GFC will help shape and influence positive forest land use on the watershed scale that not only seeks to conserve working forests, but increases the quality of forestland within the Etowah Watershed. Visual and meaningful results can be employed to put new tools and serves into place, or develop new incentives for better growth and development that lessens forest fragmentation and addresses issues on a comprehensive scale.

Timelines –

FY 2008

Q1 – Begin project, gather geospatial layers, distribute RFP for consultants.
Q2 – Complete analysis of tree canopy and impervious surface layer in cooperation with NARSAL.
Q3 – Continue to develop methodology, complete prioritization.
Q4 – Wrap-up